Tuesday, August 24

8:00 – 8:30	**Welcome (Green Auditorium)** **"The Novel Issues at PERMIS'04"** **Alex Meystel and Elena Messina**	
8:30 – 9:30	**Morning Plenary (Green Auditorium)** **Takeo Kanade, Carnegie Mellon University: User-Powered "Content-Free" Approach to Image Retrieval**	
9:30 – 10:00	Coffee Break	
10:00 – 12:00	**TuAM1 – Lecture Room A** **Invited Session: Performance Metrics for Perception and Sensor Systems I** Chair: M. Juberts *An Information Theoretic Criterion for 3D Reconstruction Algorithms*, Chowdhury, A., Chellappa, R. *Modular Programming techniques for Distributed Computing Tasks*, Cowley, A., Hsu, T., H.-C., Taylor, C. *Evaluating Reliability of Motion Features in Surveillance Videos*, Latecki, L., Moezianko, R., Pokrajac, D. *A Framework for Measuring Tracking Performance of a Sensor Network*, Krishna, K. M., Hexmoor, H.	**TuAM2 – Lecture Room B** **Performance of Goal Oriented Systems** Chair: A. Meystel Keynote Lecture: *Goal-Oriented Intelligence in Optimization of Distributed Parameter Systems*, Dr. Shlomo Orr (MRDS, Inc.) Panel Discussion Participants: Dr. Z. Boger, NIST *Classification of the Intelligent Tasks and Ability of the Agents to Achieve Their Goals*, Polyakov, L. *Agent with Reasoning and Learning: the Structure Design*, Polyakov, L.
12:00 – 1:30	**Lunch (Cafeteria)**	**Exhibits/Demonstrations (Hallway next to Green Auditorium)**
1:30 – 2:30	**Afternoon Plenary (Green Auditorium)** **Harold Szu, George Washington University: Machine IQ---for International Trade & Consumers**	
2:30 – 3:00	Coffee Break	
3:00 – 5:00	**TuPM1 – Lecture Room A** **Invited Session: Performance Metrics for Perception and Sensor Systems II** Chair: T. Hong *Miniaturized all-solid-state 3D camera for real-time range imaging*, Oggier, T., Seitz, P., Blanc, N. *Obstacle Detection using a TOF Range Camera for Indoor AGV Navigation*, Hong, T., Bostelman, R., Madhavan, R. *Performance Evaluation of Temporal Range Registration for Unmanned Vehicle Navigation*, Madhavan, R., Messina, E. *Evaluating User Performance in the Battlefield Augmented Reality System*, Julier, S., Livingston, M., Swan, J., Baillot, Y., Brown, D., Gabbard, J., Hollerer, T., Hix, D.	**TuPM2 – Lecture Room B** **The advantages of practical use of MIQ Panel Discussion** Chair: H. Szu **Measuring Cooperative Systems** Chair: A. Meystel Keynote Paper: *Measuring Cooperative Robotic Systems Using Simulation-Based Virtual Environment* by Hu, X. and Ziegler, B., presented by X. Hu General Discussion will be guided by X. Hu
6:00 – 8:00	**Welcome Reception (Holiday Inn)**	

Wednesday, August 25

8:30 – 9:30	**Morning Plenary (Green Auditorium)** **Satoshi Tadokoro, International Rescue System Institute: Overview of Japan National Project (DDT Project) on Rescue Robotics**	
9:30 – 10:00	Coffee Break	
10:00 – 12:00	**WeAM1 – Lecture Room A** **Evaluation of Human and Robot Interactions** Chair: J. Scholtz *Behavioral Entropy in Human-Robot Interaction*, Goodrich, M., E. R. Boer, J. W. Crandall, R. W. Ricks, and M. L. Quigl *Evaluation of Human-robot Interaction in the NIST Reference Search and Rescue Test Arenas*, Scholtz, J., Antonishek, B., Young, J. *Task Performance Metrics in Human-Robot Interaction: Taking a Systems Approach*, Burke, J., Murphy, R., Riddle, D., Fincannon, T. *Reduction of User Interaction by Autonomy*, Morfopoulos, A., McHenry, M., Matthies, L. *A Mixed Initiative Human-Robots Team Performance Assessment System for Use in Operational and Training Environments*, Freedy, A., Kalphat, J., McDonough, W., Jacobs, R., Freedy, E., Thayer, S. Weltman, G.	**WeAM2 – Lecture Room B** Chair: A. Meystel *Biologizing Control Systems*, P. Wang *Entropy as a Philosophy,* G. Saridis (presented by A. Meystel) Discussion will be guided by A. Meystel
12:00 – 1:30	**Lunch (Cafeteria)**	**Exhibits/Demonstrations (Hallway next to Green Aud.)**
1:30 – 2:30	**Afternoon Plenary (Green Auditorium)** **J. Spall (JHU APL), A. Guez (Drexel U.): Key Issues in Stochastic Optimization, followed by Plenary Discussion**	
2:30 – 3:00	Coffee Break	
3:00 – 5:00	**WePM1 – Lecture Room A** **General Approaches and Tools** Chair: M. Anderson *Comparing Algorithms: Rules of Thumb and an Example*, Kramer, T., Balakirsky, S. *Theoretical Framework for Comparing Several Stochastic Optimization Approaches*, Spall, J., Hill, S., Stark, D. *Measuring the Performance of Automated Planning Systems,* Nau, D., Malik G. *Experimental Studies of Integrated Cognitive Systems*, Langley, P., Messina, E. *Specification of a Test Environment and Performance Measures for Perturbation-Tolerant Cognitive Agents*, Anderson, M. *Framework for the Performance Assessment of Architectural Options on Intelligent Distributed Applications*, Haring, G., Juiz, C., Kurz, C., Puigjaner, R., Zottl, J.	**WePM2 – Lecture Room B** **Intelligent Systems and Homeland Security Panel Discussion** Chair: E. Aktan with participation of A. Meystel, Drexel, Al Wavering, NIST
5:00 – 6:30	**Tours and Demonstrations at Urban Search and Rescue Robot Reference Test Facility**	
7:00 – 10:00	**Banquet (Holiday Inn)** **J. Albus (NIST): RCS: a Cognitive Architecture for Intelligent Multi-agent Systems**	

Information Interpretation and Integration Conference (I3CON) – Lecture Room D

Thursday, August 26		
8:30 – 9:30	**Morning Plenary (Green Auditorium)** **John Sowa: The Challenge of the Knowledge Soup**	
9:30 – 10:00	Coffee Break	
10:00 – 12:00	**ThAM1 – Lecture Room A** **Measuring Performance of Autonomous Vehicles** Chair: S. Lewis *Evaluating Intelligence in Autonomous Ground Vehicle Teams*, Commuri, S., Yushan L., Hougen, D., Fierro, R. *Metrics for Intelligent Autonomy*, O'Day, S.C., M. Steinberg, C. Ygelsias, S. Klecz, K. Bonnevier, T. Moulds, R. Sincavage, M. Ricard, M. Cleary, M. Curry, T. Sliski, J. Tierno, J. Clark, F. Snyder *Measuring Performance at UAV-Based Autonomous Surveillance*, Freed, M., Harris, R., Shafto, M. *Intelligent Autonomy and Performance Measures for Coordinated Unmanned Vehicles*, Lewis, S., Weiss, Lora, G. *Traversable Terrain Modeling and Performance Measurement of Mobile Robots*, Shirkhodaie, A., Amrani, R., Chawla, N.	**ThAM2 – Lecture Room B** **Issues in Developing Adaptive Intelligence I** Chair: Gary Berg-Cross *Introduction to Issues in Developing Adaptive Intelligence*, Berg-Cross, G. *Developing Rational-Empirical Models of Intelligent Adaptive Behavior,* Berg-Cross, G. *Adaptive Innovation and Immunity*, Arata, L. *Learning, Representation, and Novelty*, Bickhard, M. *Intelligence ≠ Autonomy ≠ Capability*, Gunderson, J.P., Gunderson, L.F. *Intelligence?,* Cottam, R., Ranson, W., Vounckx, R.
12:00 – 1:00	**Lunch (Cafeteria)**	**Exhibits/Demonstrations (Hallway next to Green Auditorium)**
1:00 – 2:00	**Afternoon Plenary (Green Auditorium)** **Cliff Hudson, Department of Defense Joint Robotics Program**	
2:00 – 2:30	Coffee Break	
2:30 – 4:30	**ThPM1 – Lecture Room A** **Tools and Testbeds for Evaluating Autonomous Systems** Chair: S. Balakirsky *Application of the Crash Prevention Boundary Metric to a Road Departure Crash Warning System*, Szabo, S., Wilson, B. *Characterization and Application of a Non-Line-of-Sight Tracking System for Performance Evaluation*, Jacoff, A., Weiss, B., Norcross, R. *PRIDE: A Framework for Performance Evaluation of Intelligent Vehicles in Dynamic, On-Road Environments*, Schlenoff, C., R. Madhavan, J. Ajot *Autonomous Road Driving Areans for Performance Evaluation,* Scrapper, C., Balakirsky, S., Weiss, B. *Software Tools for the Design and Performance Evaluation of Intelligent Systems*, Joshi, S., Slicker, M., Ananthakrishnan, A.	**ThPM2 – Lecture Room B** **Issues in Developing Adaptive Intelligence II** Co-Chairs: A. Meystel and Gary Berg-Cross *Adaptive Problem Solving with Particle Systems,* Reggia, J., Rodriguez, A. *Negative Knowledge and Rational Creativity*, Bickhard, M. *Semantic Evolution in Agent Talk*, Sugiyama, S. *Agent And Multi-Entity Systems Modeling, C. Hein, H. Zebrowitz* *On Knowledge Representation Issues,* Abramovich, A.
4:30	**PerMIS'04 Concludes**	

Wednesday, August 25

Information Interpretation and Integration Conference (I_3CON)

Lecture Room D

8:30-10:00		Morning Plenary
10:00-10:30	Todd Hughes, Lockheed Martin Advanced Technology Laboratories	Introducing I^{3}CON
10:30-11:00	Mike Pool, Information Extraction and Transport	Semantic Interoperability: Case Studies in Ontology-Based Solutions
11:00-11:30	Benjamin Ashpole, Lockheed Martin Advanced Technology Laboratories	The Ontology Translation Protocol
11:30-12:00	Bill Andersen, Ontology Works	Formal Ontology and Schema Integration: A Sketch
12:00-12:30	Marc Ehrig, Institut AIFB, Universität Karlsruhe	Efficient Ontology Mapping
12:30-3:00		Lunch, Afternoon Plenary
3:00-3:30	Yun Peng, University of Maryland Baltimore County	Uncertainty in Ontology Mapping: A Bayesian Perspective
3:30-4:00	Ken Wright, AT&T Government Solutions	Artic, an Ontology Mapping Engine
4:00-4:30	Michael Gruninger, Institute for Systems Research, University of Maryland	Using Model-Theoretic Invariants for Semantic Integration
4:30-5:00	John Li, Teknowledge	LOM: A Lexicon-based Ontology Mapping Tool
5:00-5:30	All	Discussion: I^{3}CON Experiment Results and Future Directions